## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

Claims 1-4 (Canceled)

Claim 5. (Currently Amended) An arylretinamide for inducing apoptosis in a cancer cell, said arylretinamide having Structure A, B, or C below:

Structure A

wherein

R<sub>2</sub> is H, OH, NO<sub>2</sub>, CH<sub>2</sub> OH, a halide, or an alkyl comprising 1-4 carbon atoms,

R<sub>3</sub> is H, OH, NO<sub>2</sub>, CO<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, CO<sub>2</sub>H, CH<sub>2</sub>OH, a halide, or an alkyl comprising 1-4 carbon atoms;

R<sub>4</sub> is H, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, O(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, O(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, SO<sub>2</sub>CH<sub>3</sub>, SO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, SO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, SO<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, NH<sub>2</sub>, NHCOCH<sub>3</sub>, NHCOCH<sub>2</sub>CH<sub>3</sub>, NHCO(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, NHCO(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, NHCOCF<sub>3</sub>, N<sub>3</sub>, NCS, NO<sub>2</sub>, a halide, an alkyl comprising 1-4 carbon atoms, or NHCOCH<sub>2</sub>X, wherein X is a halide;

 $R_5$  is H,  $NO_2$ ,  $C(CH_3)_3$ ,  $C(CH_2CH_3)_3$ ,  $C((CH_2)_2CH_3)_3$ ,  $C((CH_2)_3CH_3)_3$ ,  $CO_2CH_3$ ,  $CO_2CH_3$ ,  $CO_2(CH_2)_2CH_3$ ,  $CO_2(CH_2)_3CH_3$ , a halide, or an alkyl comprising 1-4 carbon atoms, and

R<sub>6</sub> is H, CO<sub>2</sub>H, CO<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, a halide or an alkyl comprising 1-4 carbon atoms;

provided however that when  $R_2$ ,  $R_3$ ,  $[[R_4,]]$   $R_5$ , and  $R_6$  are all H,  $R_4$  is not OH or OCH<sub>2</sub>CH<sub>3</sub>; and also provided that when  $R_3$ ,  $R_5$ , and  $R_6$  are all H, and  $R_2$  is OH,  $R_4$  is not CO<sub>2</sub>CH<sub>3</sub>.

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wherein the OH group is at position 2,4, or 5 when the retinamido group is at linked to position 1, and the OH group is at position 3 when the rentinamido group is linked to position 2.

## Structure C

wherein  $R_7$  is  $C_1$  to  $C_4$  alkyl.

Claim 6. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is a halohydroxyphenyl retinamides which comprises a phenyl moiety that is optionally substituted with an alkyl group.

Claim 7. (Original) The arylrentiamide of claim 6 wherein the phenyl moiety is substituted with a methyl group.

Claim 8. (Withdrawn) The arylreninamide of claim 6 wherein the halo group is an iodo group.

Claim 9. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is a hydroxy-alkylphenyl retinamides or hydroxy-alkoxyphenyl retinamide, wherein the alkyl groups attached to the phenyl moiety comprise from 1 to 4 carbon atoms.

Claim 10. (Withdrawn) The arylretinamide of claim 9 wherein the arylretinamide is a hydroxy-methylphenyl or hydroxy-methoxyphenyl retinamide.

Claim 11. (Original) The arylretinamide of claim 5 is a hydroxy-nitrophenyl retinamides or alkylsulfonyl-hydroxy retinamides.

Claim 12. (Withdrawn) The arylretinamide of claim 11 wherein the arylretinamide is an ethylsulfonyl-hydroxy, retinamides.

Claim 13. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is a hydroxy-napthylphenyl retinamide.

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Claim 14. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is an N-alkyl(hydroxyphenyl) retinamides.

Claim 15. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is an aminophenyl retinamides.

Claim 16. (Original) The arylretinamide of claim 5 wherein the arylretinamide is an alkylhydroxyphenyl retinamides.

Claim 17. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is a carboxy-hydroxyphenyl retinamides selected from the group consisting of N-(2'-hydroxy-3'-carboxymethylphenyl)retinamide, N-(2'-hydroxy-6'-carboxyphenyl)retinamide, N-(2'-hydroxy-6'-carboxyphenyl)retinamide, N-(3'-hydroxy-4'-carboxyphenyl)retinamide, N-(2'-hydroxy-5'-carboxymethylphenyl)retinamide, N-(2'-hydroxy-4'-carboxyphenyl)retinamide, N-(4'-hydroxy-3'-carboxyphenyl)retinamide, N-(4'-hydroxy-3'-carboxyphenyl)retinamide.

Claim 18. (Currently Amended) An arylretinamide having Structure A below

## Structure A

wherein

R<sub>2</sub> is H, OH, NO<sub>2</sub>, CH<sub>2</sub> OH, a halide, or an alkyl comprising 1-4 carbon atoms,

R<sub>3</sub> is H, OH, NO<sub>2</sub>, CO<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, CO<sub>2</sub>H, CH<sub>2</sub>OH, a halide, or an alkyl comprising 1-4 carbon atoms;

R<sub>4</sub> is H, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, O(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, O(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, SO<sub>2</sub>CH<sub>3</sub>, SO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, SO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, NH<sub>2</sub>, NHCOCH<sub>3</sub>, NHCOCH<sub>2</sub>CH<sub>3</sub>, NHCO(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, NHCO(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, NHCOCF<sub>3</sub>, N<sub>3</sub>, NCS, NO<sub>2</sub>,+ a halide, an alkyl comprising 1-4 carbon atoms, or NHCOCH<sub>2</sub>X, wherein X is a halide;

 $R_5$  is H,  $NO_2$ ,  $C(CH_3)_3$ ,  $C(CH_2CH_3)_3$ ,  $C((CH_2)_2CH_3)_3$ ,  $C((CH_2)_3CH_3)_3$ ,  $CO_2CH_3$ ,  $CO_2CH_3$ ,  $CO_2(CH_2)_2CH_3$ ,  $CO_2(CH_2)_3CH_3$ , a halide, or an alkyl comprising 1-4 carbon atoms, and

R<sub>6</sub> is H, CO<sub>2</sub>H, CO<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, a halide, or an alkyl comprising 1-4 carbon atoms;

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provided that when  $R_2$ ,  $R_3$ , [[R<sub>4</sub>,]]  $R_5$ , and  $R_6$  are all H, R<sub>4</sub> is not OH OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, or O(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>; and also

provided that when R<sub>3</sub>, R<sub>5</sub>, and R<sub>6</sub> are all H, and R<sub>2</sub> is OH, R<sub>4</sub> is not CO<sub>2</sub>CH<sub>3</sub> or CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>.

Claim 19. (Original) A method of inducing apoptosis in a cancer cell comprising contacting the cancer cell with an arylretinamide of claim 1.

Claim 20. (Original) A method of treating cancer in a subject in need of said treatment, comprising administering one or more arylretinamides of claim 1 to the subject.

Claim 21. (Withdrawn) The method of claim 20 wherein said method further comprises administering calcium glucarate to the subject.